UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

SEP 10 1993

Mr. Orlando Monaco
Naval Facilities Engineering Command
Northern Division
Environmental Restoration Branch
10 Industrial Highway
Lester, Pennsylvania 19113

Re: Naval Air Warfare Center (NAWC), Warminster, PA

Dear Mr. Monaco:

Please find below preliminary EPA comments on a Draft Workplan Addendum for Area B Hydrogeologic Investigation submitted to EPA by Halliburton NUS under letterhead dated August 13, 1993. As discussed, these comments are considered preliminary pending EPA review of information requested in this letter, resolution of issues identified in this letter and a review by David Kargbo, EPA Hydrogeologist.

1.0 Introduction

1.1 Purpose

First paragraph, second sentence should read: "...part of the Navy's Installation Restoration (IR) and CERCLA program...)

Second paragraph, first sentence should read, "This work plan describes part of continuing IR and CERCLA Remedial Investigation (RI) work..."

Second paragraph, second sentence should read: "In particular, this document describes additional RI work which will help further identify the nature and extent of groundwater contamination attributable to Area B (Sites 5, 6 and 7) and past activities on NAWC property east of Area B."

Third paragraph should be replaced with the following paragraph: "The scope of future CERCLA RI activities addressing groundwater associated with Area B and the vicinity of Area B, including groundwater in deep bedrock, shall be developed utilizing data generated by activities described in this workplan."

Fourth paragraph should be replaced with the following: "Upon completion of the Phase II RI for NAWC, an RI report for

Operable Unit 1 was issued in April 1993. Operable Unit 1 has been defined as contaminated groundwater attributable to Areas A and B at NAWC in overburden and shallow bedrock aquifers. Findings of the Phase II RI for Area B included the detection of volatile organic compounds (VOCs) in overburden and shallow bedrock aquifers on NAWC property. In response to these findings, the EPA requested the Navy to conduct sampling of offsite residential wells within an approximate 3000 foot radius of Area B. Sampling by the Navy in response to this request identified VOCs above Maximum Contaminant Levels (MCLs) established under the Safe Drinking Water Act in approximately 30 residential wells. This Area B Hydrogeologic Investigation is being conducted to further assess the potential impacts of Area B and past activities on NAWC property east of Area B on groundwater resources."

2.0 Site Background Information

p. 2-2: Next to last paragraph, last sentence should read: "...in a g neral south to southeastward direction in areas investigated by the RI to date."

3.0 Scope of Work

3.1 : Last sentence, first paragraph should read: "...in the Casey Village area is attributable to NAWC."

p.3-2, second bullet: The Quality Assurance Project Plan (QAPP)/Sampling and Analysis Plan discussed here may be inadequate for purposes of the Area B Hydrogeologic Investigation and/or necessary additional RI, FS and RD work for Area B and the vicinity. Please see comments below on Task 4 (Media Sampling) and the QAPP (Appendix A).

4.0 Work Plan Tasks

Task 3 - Monitoring Well Installation and Construction

Per previous discussions, the definitions of the shallow bedrock, intermediate and deep bedrock aquifers have not been documented at this time. Until this definition is agreed to by the Navy and EPA, references to shallow, intermediate and deep "bedrock" wells should be deleted from the report.

In response, the first paragraph should be revised to read: "A projected total of 24 new monitoring wells will be installed. The projected wells will be installed to monitor groundwater at depths of 0 to 50 feet from ground surface (shallow wells), 50 to 100 feet from ground surface (intermediate wells) and 100 to 150 feet from ground surface (deep wells). Clusters of the three monitoring wells (shallow, intermediate and deep) will be

installed (and have been proposed) at certain locations where appropriate. The approximate locations and depths of the new wells are depicted in Figures 4-1 and 4-2. The actual location of each well will be agreed to by the Navy and EPA prior to drilling a well. The actual locations of new monitoring wells will complement the location of existing monitoring wells as necessary. Shallow wells already exist at three proposed cluster locations."

Per previous conversations with the Navy, the EPA understands the Navy has recently conducted interviews with current and former Navy employees regarding past disposal activities by the Navy and/or other parties in the vicinity of Area B, both on and off NAWC property. The EPA requests the results of these interviews. The results of these interviews should be reviewed and considered by the EPA and the Navy to help identify the actual location of the new monitoring wells and the need for any additional new monitoring wells.

As indicated in the Final RI report for OU-1, additional investigation is needed to assess the impact of Area B on the tributary to Upper Southampton Creek. This impact should be identified prior to finalizing the RD for OU-1 if possible. The investigations necessary to identify this impact should be conisidered for inclusion in the scope of this work.

Figures 4-1 and 4-2

These figures do not appear to be to scale. To help identify the actual location of the new monitoring wells, survey maps with actual locations of existing wells should be provided to EPA.

Third paragraph

Should read: "...each proposed well cluster and sampling location...

As discussed by telecon, the EPA is in agreement regarding the specifications of the monitoring wells as described in this Workplan. In addition, the number and depth of the wells has apparantly been approximated to the extent necessary to procure a driller. As a result, the Navy should proceed with procuring a drilling contractor within the timeframe necessary to maintain the schedule proposed in Section 5.0.

Upon review of the actual location of existing wells, the results of the interviews, EPA may find that several additional wells are n cessary to meet the objectives of this particular RI work. For example, at this time it is unclear whether the proposed well network will adequat ly monitor potential releases from probable disposal trenches visible in aerial photographs dated March 31,

1965, August 7, 1971, 1977 (month and date unknown) and June 1, 1978. All of the probabl trenches appear in the vicinity of Site 5. At this time, it appears that at least one additional shallow well will be required to monitor releases from the probable trenches.

Well development should be performed in a manner consistent with the attached Monitoring Well Development Guidelines for Superfund Project Managers (EPA Ground Water Forum, April 1992) (Enclosure 1). Please note this guidance states that "airlift pumping" is a "generally unsuitable method". Therefore, this method is not agreeable to EPA without justification.

Regarding the depth of well screens, the Navy should consult with the EPA or EPA representatives (e.g. Black and Veatch or USGS) in the field with regard which water bearing-zones should be screened (i.e. which are "major water bearing zones").

Task 4 - Media Sampling

All groundwater samples should be analyzed for oxidation/ reduction potential.

Sampling of groundwater from a newly constructed well should be performed at least two weeks after the completion of the well development.

As discussed and noted above, the actual scope of sampling should be determined by the Navy and EPA in a subsequent meeting/conference call(s). As discussed, all available Tentatively Identified Compound Data for all organic fractions for monitoring wells in Area B should be submitted to the EPA for review to help determine the actual scope of sampling. As discussed, the proposed low frequency of metals sampling/analysis and lack of semi-volatile organic and pesticide/PCB fraction sampling/analysis is of concern to EPA.

Task 9 -Reporting

Since this is considered a subset of RI work, a formal report containing the findings of this investigation should be prepared.

Task 11 - Waste Disposal

The EPA has requested DER to comment as needed.

5.0 Project Staffing and Scheduling

At this time, the schedule for the project is assumed to be as outlined in this section.

Appendix - Quality Assuranc Project Plan

Complete comments cannot be developed until the scope of the sampling plan is finalized.

6.5 Sampling Equipment and Protocols

The comments below address the applicability of the referenced sections in HNUS SOP SA-1.1:

5.4 Evacuation of Static Water (Purging)

Under 5.4.1: The purge rate should not exceed the rate of the rate of pumping during the well development process. While purging three to five well volumes has been considered effective, "over-purging" of water should be avoided to prevent encouraging flow of groundwater from other areas into the well. Stabilization of certain groundwater parameters (e.g. pH, DO, etc.) (measured through real-time monitoring) has been recognized as an appropriate measurement of when purging should cease. (See Puls, R.W. and R.M Powell, 1992, Acquisition of Representative Ground Water Quality Samples for Metals, Ground Water Monitoring Review, Vol. 12, No. 3, pp. 167-176.)

5.5 Sampling

Under 5.5.2: To obtain representative samples, groundwater should be sampled using either a bottom-loading bailer or a low-flow pump. Should a pump be utililized, the flow rate of the pump should be specified in the final QAPP.

Should you have any questions or comments regarding the above, please give me a call.

Sincerely,

Darius Ostrauskas
Remedial Project Manager

Enclosure (1)

cc: Andy Rola, B & V
David Kargbo
David Kennedy, DER